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SEQUENCE LISTING

<110> Schulze-Lefert, Paul MJ
Panstruga, Ralph
Buschges, Rainer

<120> Polynucleotide and its use for modulating a defence
response in plants

<130> 620-125

<140> US 09/722,377

<141> 2000-11-28

<150> US 09/230,728

<151> 1999-01-29

<150> PCT/GB97/02046

<151> 1997-07-29

<150> GB 9615879.5

<151> 1996-07-29

<150> GB 9622626.1

<151> 1996-10-30

<150> GB 9704789.8

<151> 1997-03-07

<160> 79

<170> PatentIn Ver. 2.1

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 65 70 75 80
 Ile Ile Ala Lys Ile Cys Ile Ser Glu Asp Ala Ala Asp Val Met Trp
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 Pro Cys Lys Arg Gly Thr Glu Gly Arg Lys Pro Ser Lys Tyr Val Asp
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Val Arg Asp Thr Asp Met Leu Met Ala Gln Met Ile Gly Asp Ala Thr
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<212> DNA

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<213> *Hordeum vulgare*

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<210> 11

<211> 1611

<212> DNA

<213> *Oryza sativa*

<400> 11

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<210> 12

<211> 1635

<212> DNA

<213> *Hordeum vulgare*

<400> 12

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<213> Arabidopsis thaliana

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<210> 14
<211> 536
<212> PRT
<213> Oryza sativa

<400> 14
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Cys Ile Pro Lys Ser Ala Ala Asn Ile Leu Leu Pro Cys Lys Ala Gly
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Phe Val Gly Ile Leu Val Leu Phe Leu Asp Ile His Gly Leu Gly Thr
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Arg Ala Thr Val Ile Gln Gly Ala Pro Met Val Glu Pro Ser Asn Lys
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Tyr Pro Val Pro Ala Ala Ala Ala Ser Arg Gln Leu Leu Asp Asp Pro
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Asp Phe Ser Phe Ser Ala Gln Arg
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<210> 15

<211> 544

<212> PRT

<213> Hordeum vulgare

<400> 15

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<210> 16
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<400> 16

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Val Val Ala Gly Val Cys Thr Val Ile Val Ala Ile Ser Leu Ala Val
20 25 30

Glu Arg Leu Leu His Tyr Phe Gly Thr Val Leu Lys Lys Lys Lys Gln
35 40 45

Lys Pro Leu Tyr Glu Ala Leu Gln Lys Val Lys Glu Glu Leu Met Leu
50 55 60

Leu Gly Phe Ile Ser Leu Leu Leu Thr Val Phe Gln Gly Leu Ile Ser
65 70 75 80

Lys Phe Cys Val Lys Glu Asn Val Leu Met His Met Leu Pro Cys Ser
85 90 95

Leu Asp Ser Arg Arg Glu Ala Gly Ala Ser Glu His Lys Asn Val Thr
100 105 110

Ala Lys Glu His Phe Gln Thr Phe Leu Pro Ile Val Gly Thr Thr Arg
115 120 125

Arg Leu Leu Ala Glu His Ala Ala Val Gln Val Gly Tyr Cys Ser Glu
130 135 140

Lys Gly Lys Val Pro Leu Leu Ser Leu Glu Ala Leu His His Leu His
145 150 155 160

Ile Phe Ile Phe Val Leu Ala Ile Ser His Val Thr Phe Cys Val Leu
165 170 175

Thr Val Ile Phe Gly Ser Thr Arg Ile His Gln Trp Lys Lys Trp Glu
180 185 190

Asp Ser Ile Ala Asp Glu Lys Phe Asp Pro Glu Thr Ala Leu Arg Lys
195 200 205

Arg Arg Val Thr His Val His Asn His Ala Phe Ile Lys Glu His Phe
210 215 220

Leu Gly Ile Gly Lys Asp Ser Val Ile Leu Gly Trp Thr Gln Ser Phe
225 230 235 240

Leu Lys Gln Phe Tyr Asp Ser Val Thr Lys Ser Asp Tyr Val Thr Leu
245 250 255

Arg Leu Gly Phe Ile Met Thr His Cys Lys Gly Asn Pro Lys Leu Asn
260 265 270

Phe His Lys Tyr Met Met Arg Ala Leu Glu Asp Asp Phe Lys Gln Val
275 280 285

Val Gly Ile Ser Trp Tyr Leu Trp Ile Phe Val Val Ile Phe Leu Leu
290 295 300

Leu Asn Val Asn Gly Trp His Thr Tyr Phe Trp Ile Ala Phe Ile Pro
305 310 315 320

Phe Ala Leu Leu Leu Ala Val Gly Thr Lys Leu Glu His Val Ile Ala
325 330 335

Gln Leu Ala His Glu Val Ala Glu Lys His Val Ala Ile Glu Gly Asp
340 345 350

Leu Val Val Lys Pro Ser Asp Glu His Phe Trp Phe Ser Lys Pro Gln
355 360 365

Ile Val Leu Tyr Leu Ile His Phe Ile Leu Phe Gln Asn Ala Phe Glu
370 375 380

Ile Ala Phe Phe Phe Trp Ile Trp Val Thr Tyr Gly Phe Asp Ser Cys
385 390 395 400

Ile Met Gly Gln Val Arg Tyr Ile Val Pro Arg Leu Val Ile Gly Val
405 410 415

Phe Ile Gln Val Leu Cys Ser Tyr Ser Thr Leu Pro Leu Tyr Ala Ile
420 425 430

Val Ser Gln Met Gly Ser Ser Phe Lys Lys Ala Ile Phe Glu Glu Asn
435 440 445

Val Gln Val Gly Leu Val Gly Trp Ala Gln Lys Val Lys Gln Lys Arg
450 455 460

Asp Leu Lys Ala Ala Ala Ser Asn Gly Asp Glu Gly Ser Ser Gln Ala
465 470 475 480

Gly Pro Gly Pro Asp Ser Gly Ser Gly Ser Ala Pro Ala Ala Gly Pro
485 490 495

Gly Ala Gly Phe Ala Gly Ile Gln Leu Ser Arg Val Thr Arg Asn Asn
500 505 510

Ala Gly Asp Thr Asn Asn Glu Ile Thr Pro Asp His Asn Asn
515 520 525

<210> 17

<211> 544

<212> PRT

<213> Hordeum vulgare

<400> 17

Met Ala Gly Pro Ala Gly Gly Arg Glu Leu Ser Asp Thr Pro Thr Trp
1 5 10 15

Ala Val Ala Val Val Cys Ala Val Met Ile Leu Val Ser Val Ala Met
20 25 30

Glu	His	Ala	Leu	His	Lys	Leu	Gly	His	Trp	Phe	His	Lys	Trp	Arg	Lys		
		35					40					45					
Lys	Ala	Leu	Gly	Glu	Ala	Leu	Glu	Lys	Met	Lys	Ala	Glu	Leu	Met	Leu		
	50					55					60						
Val	Gly	Phe	Ile	Ser	Leu	Leu	Leu	Ile	Val	Thr	Gln	Asp	Pro	Val	Ser		
65					70					75					80		
Arg	Ile	Cys	Ile	Ser	Lys	Glu	Ala	Gly	Glu	Lys	Met	Leu	Pro	Cys	Lys		
				85					90						95		
Pro	Tyr	Asp	Gly	Ala	Gly	Gly	Gly	Lys	Gly	Lys	Asp	Asn	His	Arg	Arg		
			100					105						110			
Leu	Leu	Trp	Leu	Gln	Gly	Glu	Ser	Glu	Thr	His	Arg	Arg	Phe	Leu	Ala		
		115					120						125				
Ala	Pro	Ala	Gly	Val	Asp	Val	Cys	Ala	Lys	Gln	Gly	Lys	Val	Ala	Leu		
	130					135					140						
Met	Ser	Ala	Gly	Ser	Met	His	Gln	Leu	His	Ile	Phe	Ile	Phe	Val	Leu		
145					150					155					160		
Ala	Val	Phe	His	Val	Leu	Tyr	Ser	Val	Val	Thr	Met	Thr	Leu	Ser	Arg		
				165					170						175		
Leu	Lys	Met	Lys	Gln	Trp	Lys	Lys	Trp	Glu	Ser	Glu	Thr	Ala	Ser	Leu		
			180					185						190			
Glu	Tyr	Gln	Phe	Ala	Asn	Asp	Pro	Ser	Arg	Cys	Arg	Phe	Thr	His	Gln		
		195					200					205					
Thr	Thr	Leu	Val	Arg	Arg	His	Leu	Gly	Leu	Ser	Ser	Thr	Pro	Gly	Val		
	210					215						220					
Arg	Trp	Val	Val	Ala	Phe	Phe	Arg	Gln	Phe	Phe	Thr	Ser	Val	Thr	Lys		
225					230					235					240		
Val	Asp	Tyr	Leu	Thr	Leu	Arg	Gln	Gly	Phe	Ile	Asn	Ala	His	Leu	Ser		
				245					250					255			
Gln	Gly	Asn	Arg	Phe	Asp	Phe	His	Lys	Tyr	Ile	Lys	Arg	Ser	Leu	Glu		
			260					265					270				
Asp	Asp	Phe	Lys	Val	Val	Val	Arg	Ile	Ser	Leu	Lys	Leu	Trp	Phe	Val		
		275					280					285					
Ala	Val	Leu	Ile	Leu	Phe	Leu	Asp	Phe	Asp	Gly	Ile	Gly	Thr	Leu	Leu		
	290					295					300						
Trp	Met	Ser	Val	Val	Pro	Leu	Val	Ile	Leu	Leu	Trp	Val	Gly	Thr	Lys		
305					310					315					320		
Leu	Glu	Met	Val	Ile	Met	Glu	Met	Ala	Gln	Glu	Ile	His	Asp	Arg	Glu		
				325					330					335			

Ser Val Val Lys Gly Ala Pro Ala Val Glu Pro Ser Asn Lys Tyr Phe
 340 345 350
 Trp Phe Asn Arg Pro Asp Trp Val Leu Phe Leu Met His Leu Thr Leu
 355 360 365
 Phe Gln Asn Ala Phe Gln Met Ala His Phe Val Trp Thr Val Ala Thr
 370 375 380
 Pro Gly Leu Lys Lys Cys Tyr His Glu Lys Met Ala Met Ser Ile Ala
 385 390 395 400
 Lys Val Val Leu Gly Val Ala Ala Gln Ile Leu Cys Ser Tyr Ile Thr
 405 410 415
 Phe Pro Leu Tyr Ala Leu Val Thr Gln Met Gly Ser His Met Lys Arg
 420 425 430
 Ser Ile Phe Asp Glu Gln Thr Ala Lys Ala Leu Thr Asn Trp Arg Lys
 435 440 445
 Met Ala Lys Glu Lys Lys Lys Ala Arg Asp Ala Ala Met Leu Met Ala
 450 455 460
 Gln Met Gly Gly Gly Ala Thr Pro Ser Val Gly Ser Ser Pro Val His
 465 470 475 480
 Leu Leu His Lys Ala Gly Ala Arg Ser Asp Asp Pro Gln Ser Val Pro
 485 490 495
 Ala Ser Pro Arg Ala Glu Lys Glu Gly Gly Gly Val Gln His Pro Ala
 500 505 510
 Arg Lys Val Pro Pro Cys Asp Gly Trp Arg Ser Ala Ser Ser Pro Ala
 515 520 525
 Leu Asp Ala His Ile Pro Gly Ala Asp Phe Gly Phe Ser Thr Gln Arg
 530 535 540

<210> 18

<211> 536

<212> PRT

<213> Oryza sativa

<400> 18

Met Ala Gly Gly Arg Ser Gly Ser Arg Glu Leu Pro Glu Thr Pro Thr
 1 5 10 15

Trp Ala Val Ala Val Val Cys Ala Val Leu Val Leu Val Ser Ala Ala
 20 25 30

Met Glu His Gly Leu His Asn Leu Ser His Lys Thr Thr Ala Glu Val

35					40					45					
Leu	Ile	Phe	Leu	Val	Leu	Ser	Ala	Leu	Ala	Glu	Leu	Met	Leu	Leu	Gly
50					55					60					
Phe	Ile	Ser	Leu	Leu	Leu	Thr	Val	Ala	Gln	Ala	Pro	Ile	Ser	Lys	Ile
65					70					75					80
Cys	Ile	Pro	Lys	Ser	Ala	Ala	Asn	Ile	Leu	Leu	Pro	Cys	Lys	Ala	Gly
				85					90					95	
Gln	Asp	Ala	Ile	Glu	Glu	Glu	Ala	Ala	Ser	Gly	Arg	Arg	Ser	Leu	Ala
			100					105					110		
Gly	Ala	Gly	Gly	Gly	Asp	Tyr	Cys	Ser	Lys	Phe	Asp	Gly	Lys	Val	Ala
		115					120					125			
Leu	Met	Ser	Ala	Lys	Ser	Met	His	Gln	Leu	His	Ile	Phe	Ile	Phe	Val
	130					135					140				
Leu	Ala	Val	Phe	His	Val	Thr	Tyr	Cys	Ile	Ile	Thr	Met	Gly	Leu	Gly
145					150					155					160
Arg	Leu	Lys	Met	Lys	Lys	Trp	Lys	Lys	Trp	Glu	Ser	Gln	Thr	Asn	Ser
				165					170					175	
Leu	Glu	Tyr	Gln	Phe	Ala	Ile	Asp	Pro	Ser	Arg	Phe	Arg	Phe	Thr	His
			180					185					190		
Gln	Thr	Ser	Phe	Val	Lys	Arg	His	Leu	Gly	Ser	Phe	Ser	Ser	Thr	Pro
		195					200					205			
Gly	Leu	Arg	Trp	Ile	Val	Ala	Phe	Phe	Arg	Gln	Phe	Phe	Gly	Ser	Val
	210					215					220				
Thr	Lys	Val	Asp	Tyr	Leu	Thr	Met	Arg	Gln	Gly	Phe	Ile	Asn	Ala	His
225					230					235					240
Leu	Ser	Gln	Asn	Ser	Lys	Phe	Asp	Phe	His	Lys	Tyr	Ile	Lys	Arg	Ser
				245					250					255	
Leu	Glu	Asp	Asp	Phe	Lys	Val	Val	Val	Gly	Ile	Ser	Leu	Pro	Leu	Trp
			260					265					270		
Phe	Val	Gly	Ile	Leu	Val	Leu	Phe	Leu	Asp	Ile	His	Gly	Leu	Gly	Thr
		275					280					285			
Leu	Ile	Trp	Ile	Ser	Phe	Val	Pro	Leu	Ile	Ile	Val	Leu	Leu	Val	Gly
	290					295					300				
Thr	Lys	Leu	Glu	Met	Val	Ile	Met	Glu	Met	Ala	Gln	Glu	Ile	Gln	Asp
305					310					315					320
Arg	Ala	Thr	Val	Ile	Gln	Gly	Ala	Pro	Met	Val	Glu	Pro	Ser	Asn	Lys
				325					330					335	
Tyr	Phe	Trp	Phe	Asn	Arg	Pro	Asp	Trp	Val	Leu	Phe	Phe	Ile	His	Leu

340										345					350				
Thr	Leu	Phe	His	Asn	Ala	Phe	Gln	Met	Ala	His	Phe	Val	Trp	Thr	Met				
		355					360					365							
Ala	Thr	Pro	Gly	Leu	Lys	Lys	Cys	Phe	His	Glu	Asn	Ile	Trp	Leu	Ser				
	370					375					380								
Ile	Val	Glu	Val	Ile	Val	Gly	Ile	Ser	Leu	Gln	Val	Leu	Cys	Ser	Tyr				
385					390					395					400				
Ile	Thr	Phe	Pro	Leu	Tyr	Ala	Leu	Val	Thr	Gln	Met	Gly	Ser	Asn	Met				
			405						410					415					
Lys	Lys	Thr	Ile	Phe	Glu	Glu	Gln	Thr	Met	Lys	Ala	Leu	Met	Asn	Trp				
			420					425					430						
Arg	Lys	Lys	Ala	Met	Glu	Lys	Lys	Lys	Val	Arg	Asp	Ala	Asp	Ala	Phe				
	435						440					445							
Leu	Ala	Gln	Met	Ser	Val	Asp	Phe	Ala	Thr	Pro	Ala	Ser	Ser	Arg	Ser				
450						455					460								
Ala	Ser	Pro	Val	His	Leu	Leu	Gln	Val	Thr	Gly	Arg	Val	Gly	Arg	Pro				
465					470					475					480				
Pro	Ser	Pro	Ile	Thr	Val	Ala	Ser	Pro	Pro	Ala	Pro	Glu	Glu	Asp	Met				
			485					490						495					
Tyr	Pro	Val	Pro	Ala	Ala	Ala	Ala	Ser	Arg	Gln	Leu	Leu	Asp	Asp	Pro				
		500						505					510						
Pro	Asp	Arg	Arg	Trp	Met	Ala	Ser	Ser	Ser	Ala	Asp	Ile	Ala	Asp	Ser				
	515						520					525							
Asp	Phe	Ser	Phe	Ser	Ala	Gln	Arg												
530						535													

<210> 19
 <211> 526
 <212> PRT
 <213> Arabidopsis thaliana

<400> 19
 Met Gly His Gly Gly Glu Gly Met Ser Leu Glu Phe Thr Pro Thr Trp
 1 5 10 15
 Val Val Ala Gly Val Cys Thr Val Ile Val Ala Ile Ser Leu Ala Val
 20 25 30
 Glu Arg Leu Leu His Tyr Phe Gly Thr Val Leu Lys Lys Lys Lys Gln
 35 40 45
 Lys Pro Leu Tyr Glu Ala Leu Gln Lys Val Lys Glu Glu Leu Met Leu
 50 55 60

Leu	Gly	Phe	Ile	Ser	Leu	Leu	Leu	Thr	Val	Phe	Gln	Gly	Leu	Ile	Ser	65	70	75	80
Lys	Phe	Cys	Val	Lys	Glu	Asn	Val	Leu	Met	His	Met	Leu	Pro	Cys	Ser	85	90	95	
Leu	Asp	Ser	Arg	Arg	Glu	Ala	Gly	Ala	Ser	Glu	His	Lys	Asn	Val	Thr	100	105	110	
Ala	Lys	Glu	His	Phe	Gln	Thr	Phe	Leu	Pro	Ile	Val	Gly	Thr	Thr	Arg	115	120	125	
Arg	Leu	Leu	Ala	Glu	His	Ala	Ala	Val	Gln	Val	Gly	Tyr	Cys	Ser	Glu	130	135	140	
Lys	Gly	Lys	Val	Pro	Leu	Leu	Ser	Leu	Glu	Ala	Leu	His	His	Leu	His	145	150	155	160
Ile	Phe	Ile	Phe	Val	Leu	Ala	Ile	Ser	His	Val	Thr	Phe	Cys	Val	Leu	165	170	175	
Thr	Val	Ile	Phe	Gly	Ser	Thr	Arg	Ile	His	Gln	Trp	Lys	Lys	Trp	Glu	180	185	190	
Asp	Ser	Ile	Ala	Asp	Glu	Lys	Phe	Asp	Pro	Glu	Thr	Ala	Leu	Arg	Lys	195	200	205	
Arg	Arg	Val	Thr	His	Val	His	Asn	His	Ala	Phe	Ile	Lys	Glu	His	Phe	210	215	220	
Leu	Gly	Ile	Gly	Lys	Asp	Ser	Val	Ile	Leu	Gly	Trp	Thr	Gln	Ser	Phe	225	230	235	240
Leu	Lys	Gln	Phe	Tyr	Asp	Ser	Val	Thr	Lys	Ser	Asp	Tyr	Val	Thr	Leu	245	250	255	
Arg	Leu	Gly	Phe	Ile	Met	Thr	His	Cys	Lys	Gly	Asn	Pro	Lys	Leu	Asn	260	265	270	
Phe	His	Lys	Tyr	Met	Met	Arg	Ala	Leu	Glu	Asp	Asp	Phe	Lys	Gln	Val	275	280	285	
Val	Gly	Ile	Ser	Trp	Tyr	Leu	Trp	Ile	Phe	Val	Val	Ile	Phe	Leu	Leu	290	295	300	
Leu	Asn	Val	Asn	Gly	Trp	His	Thr	Tyr	Phe	Trp	Ile	Ala	Phe	Ile	Pro	305	310	315	320
Phe	Ala	Leu	Leu	Leu	Ala	Val	Gly	Thr	Lys	Leu	Glu	His	Val	Ile	Ala	325	330	335	
Gln	Leu	Ala	His	Glu	Val	Ala	Glu	Lys	His	Val	Ala	Ile	Glu	Gly	Asp	340	345	350	
Leu	Val	Val	Lys	Pro	Ser	Asp	Glu	His	Phe	Trp	Phe	Ser	Lys	Pro	Gln	355	360	365	

Ile Val Leu Tyr Leu Ile His Phe Ile Leu Phe Gln Asn Ala Phe Glu
 370 375 380
 Ile Ala Phe Phe Phe Trp Ile Trp Val Thr Tyr Gly Phe Asp Ser Cys
 385 390 395 400
 Ile Met Gly Gln Val Arg Tyr Ile Val Pro Arg Leu Val Ile Gly Val
 405 410 415
 Phe Ile Gln Val Leu Cys Ser Tyr Ser Thr Leu Pro Leu Tyr Ala Ile
 420 425 430
 Val Ser Gln Met Gly Ser Ser Phe Lys Lys Ala Ile Phe Glu Glu Asn
 435 440 445
 Val Gln Val Gly Leu Val Gly Trp Ala Gln Lys Val Lys Gln Lys Arg
 450 455 460
 Asp Leu Lys Ala Ala Ala Ser Asn Gly Asp Glu Gly Ser Ser Gln Ala
 465 470 475 480
 Gly Pro Gly Pro Asp Ser Gly Ser Gly Ser Ala Pro Ala Ala Gly Pro
 485 490 495
 Gly Ala Gly Phe Ala Gly Ile Gln Leu Ser Arg Val Thr Arg Asn Asn
 500 505 510
 Ala Gly Asp Thr Asn Asn Glu Ile Thr Pro Asp His Asn Asn
 515 520 525

<210> 20
 <211> 100
 <212> PRT
 <213> Hordeum vulgare

<400> 20
 Lys Tyr Ile Lys Arg Ser Met Glu Asp Asp Phe Lys Val Val Val Gly
 1 5 10 15
 Ile Ser Leu Pro Leu Trp Gly Val Ala Ile Leu Thr Leu Phe Leu Asp
 20 25 30
 Ile Asn Gly Val Gly Thr Leu Ile Trp Ile Ser Phe Ile Pro Leu Val
 35 40 45
 Ile Leu Leu Cys Val Gly Thr Lys Leu Glu Met Ile Ile Met Glu Met
 50 55 60
 Ala Leu Glu Ile Gln Asp Arg Ala Ser Val Ile Lys Gly Ala Pro Val
 65 70 75 80
 Val Glu Pro Ser Asn Lys Phe Phe Trp Phe His Arg Pro Asp Trp Val
 85 90 95

Leu Phe Phe Ile
100

<210> 21
<211> 100
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (23, 29, 48, 84, 85)
<223> Xaa is any amino acid

<400> 21
Lys Tyr Met Met Arg Ala Leu Glu Asp Asp Phe Lys Gln Val Val Gly
1 5 10 15
Ile Ser Trp Tyr Leu Trp Xaa Phe Val Val Ile Phe Xaa Leu Leu Asn
20 25 30
Val Asn Gly Trp His Thr Tyr Phe Trp Ile Ala Phe Ile Pro Phe Xaa
35 40 45
Leu Leu Leu Ala Val Gly Thr Lys Leu Glu His Val Ile Ala Gln Leu
50 55 60
Ala His Glu Val Ala Glu Lys His Val Ala Ile Glu Gly Asp Leu Val
65 70 75 80
Val Lys Pro Xaa Xaa Glu His Phe Trp Phe Ser Lys Pro Gln Ile Val
85 90 95
Leu Tyr Leu Ile
100

<210> 22
<211> 83
<212> PRT
<213> Hordeum vulgare

<400> 22
Lys Tyr Ile Lys Arg Ser Met Glu Asp Asp Phe Lys Val Val Val Gly
1 5 10 15
Ile Ser Leu Pro Leu Trp Gly Val Ala Ile Leu Thr Leu Phe Leu Asp
20 25 30
Ile Asn Gly Val Gly Thr Leu Ile Trp Ile Ser Phe Ile Pro Leu Val
35 40 45
Ile Leu Leu Cys Val Gly Thr Lys Leu Glu Met Ile Ile Met Glu Met
50 55 60

Ala Leu Glu Ile Gln Asp Arg Ala Ser Val Ile Lys Gly Ala Pro Val
65 70 75 80

Val Glu Pro

<210> 23

<211> 83

<212> PRT

<213> Arabidopsis thaliana

<220>

<221> SITE

<222> (23)

<223> Xaa is any amino acid

<400> 23

Lys Tyr Met Met Arg Ala Leu Glu Asp Asp Phe Lys Gln Val Val Gly
1 5 10 15

Ile Ser Trp Tyr Leu Trp Xaa Phe Val Val Ile Phe Leu Leu Leu Asn
20 25 30

Val Asn Gly Trp His Thr Tyr Phe Trp Ile Ala Phe Ile Pro Phe Ala
35 40 45

Leu Leu Leu Ala Val Gly Thr Lys Leu Glu His Val Ile Ala Gln Leu
50 55 60

Ala His Glu Val Ala Glu Lys His Val Ala Ile Glu Gly Asp Leu Val
65 70 75 80

Val Lys Pro

<210> 24

<211> 32

<212> PRT

<213> Hordeum vulgare

<400> 24

Trp Ala Val Ala Val Val Phe Ala Ala Met Val Leu Val Ser Val Leu
1 5 10 15

Met Glu His Gly Leu His Lys Leu Gly His Trp Phe Gln His Arg His
20 25 30

<210> 25

<211> 32
<212> PRT
<213> Arabidopsis thaliana

<400> 25
Trp Ile Ala Phe Ile Pro Phe Ala Leu Leu Leu Ala Val Gly Thr Lys
1 5 10 15
Leu Glu His Val Ile Ala Gln Leu Ala His Glu Val Ala Glu Lys His
20 25 30

<210> 26
<211> 17
<212> PRT
<213> Hordeum vulgare

<400> 26
Glu Pro Ser Asn Lys Phe Phe Trp Phe His Arg Pro Asp Trp Val Leu
1 5 10 15

Phe

<210> 27
<211> 17
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (14)
<223> Xaa is any amino acid

<400> 27
Glu Thr Ser Asp Glu His Phe Trp Phe Ser Lys Pro Gln Xaa Val Leu
1 5 10 15

Tyr

<210> 28
<211> 96
<212> PRT
<213> Hordeum vulgare

<400> 28
Ser Lys Phe Asp Phe His Lys Tyr Ile Lys Arg Ser Met Glu Asp Asp

1	5	10	15
Phe Lys Val Val Val Gly Ile Ser Leu Pro Leu Trp Gly Val Ala Ile			
20	25	30	
Leu Thr Leu Phe Leu Asp Ile Asn Gly Val Gly Thr Leu Ile Trp Ile			
35	40	45	
Ser Phe Ile Pro Leu Val Ile Leu Leu Cys Val Gly Thr Lys Leu Glu			
50	55	60	
Met Ile Ile Met Glu Met Ala Leu Glu Ile Gln Asp Arg Ala Ser Val			
65	70	75	80
Ile Lys Gly Ala Pro Val Val Glu Pro Ser Asn Lys Phe Phe Trp Phe			
85	90	95	

<210> 29
 <211> 96
 <212> PRT
 <213> Arabidopsis thaliana

<220>
 <221> SITE
 <222> (93)
 <223> Xaa is any amino acid

<400> 29
Ser Arg Phe Asp Phe Arg Lys Tyr Ile Gln Arg Ser Leu Glu Lys Asp
1 5 10 15
Phe Lys Thr Val Val Glu Ile Ser Pro Val Ile Trp Phe Val Ala Val
20 25 30
Leu Phe Leu Leu Thr Asn Ser Tyr Gly Leu Arg Ser Tyr Leu Trp Leu
35 40 45
Pro Phe Ile Pro Leu Val Val Ile Leu Ile Val Gly Thr Lys Leu Glu
50 55 60
Val Ile Ile Thr Lys Leu Gly Leu Arg Ile Gln Glu Glu Gly Asp Val
65 70 75 80
Val Arg Gly Ala Pro Val Val Gln Pro Gly Asp Asp Xaa Phe Trp Phe
85 90 95

<210> 30

<211> 45
<212> PRT
<213> Hordeum vulgare

<400> 30
Ser Ser Thr Pro Gly Ile Arg Trp Val Val Ala Phe Phe Arg Gln Phe
1 5 10 15
Phe Arg Ser Val Thr Lys Val Asp Tyr Leu Thr Leu Arg Ala Gly Phe
20 25 30
Ile Asn Ala His Leu Ser Gln Asn Ser Lys Phe Asp Phe
35 40 45

<210> 31
<211> 45
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (29)
<223> Xaa is any amino acid

<400> 31
Ser Lys Thr Arg Val Thr Leu Trp Ile Val Cys Phe Phe Arg Gln Phe
1 5 10 15
Phe Gly Ser Val Thr Lys Val Asp Tyr Leu Ala Leu Xaa His Gly Phe
20 25 30
Ile Met Ala His Phe Ala Pro Gly Asn Glu Ser Arg Phe
35 40 45

<210> 32
<211> 86
<212> PRT
<213> Hordeum vulgare

<400> 32
Ser Ser Thr Pro Gly Ile Arg Trp Val Val Ala Phe Phe Arg Gln Phe
1 5 10 15
Phe Arg Ser Val Thr Lys Val Asp Tyr Leu Thr Leu Arg Ala Gly Phe
20 25 30
Ile Asn Ala His Leu Ser Gln Asn Ser Lys Phe Asp Phe His Lys Tyr
35 40 45
Ile Lys Arg Ser Met Glu Asp Asp Phe Lys Val Val Val Gly Ile Ser
50 55 60

Leu Pro Leu Trp Gly Val Ala Ile Leu Thr Leu Phe Leu Asp Ile Asn
65 70 75 80

Gly Val Gly Thr Leu Ile
85

<210> 33
<211> 85
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (6, 33, 51, 64, 79)
<223> Xaa is any amino acid

<400> 33
Thr Thr Thr Pro Phe Xaa Phe Asn Val Gly Cys Phe Phe Arg Gln Phe
1 5 10 15

Phe Val Ser Val Glu Arg Thr Asp Tyr Leu Thr Leu Arg His Gly Phe
20 25 30

Xaa Ser Ala His Leu Ala Pro Gly Arg Lys Phe Asn Phe Gln Arg Tyr
35 40 45

Ile Lys Xaa Ser Leu Glu Asp Asp Phe Lys Leu Val Val Gly Ile Xaa
50 55 60

Pro Val Leu Trp Ala Ser Phe Val Ile Phe Leu Ala Val Gln Xaa Trp
65 70 75 80

Leu Gly Thr Ile Val
85

<210> 34
<211> 57
<212> PRT
<213> Hordeum vulgare

<400> 34
Met Arg Thr Trp Lys Lys Trp Glu Thr Glu Thr Thr Ser Leu Glu Tyr
1 5 10 15

Gln Phe Ala Asn Asp Pro Ala Arg Phe Arg Phe Thr His Gln Thr Ser
20 25 30

Phe Val Lys Arg His Leu Gly Leu Ser Ser Thr Pro Gly Ile Arg Trp
35 40 45

Val Val Ala Phe Phe Arg Gln Phe Phe
50 55

<210> 35
<211> 57
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (10, 17, 19, 47)
<223> Xaa is any amino acid

<400> 35
Ile Arg Gly Trp Lys Lys Trp Glu Gln Xaa Thr Leu Ser Asn Asp Tyr
1 5 10 15
Xaa Phe Xaa Ile Asp His Ser Arg Leu Arg Leu Thr His Glu Thr Ser
20 25 30
Phe Val Arg Glu His Thr Ser Phe Trp Thr Thr Thr Pro Phe Xaa Phe
35 40 45
Asn Val Gly Cys Phe Phe Arg Gln Phe
50 55

<210> 36
<211> 19
<212> PRT
<213> Hordeum vulgare

<400> 36
Thr Leu Phe Leu Asp Ile Asn Gly Val Gly Thr Leu Ile Trp Ile Ser
1 5 10 15
Phe Ile Pro

<210> 37
<211> 19
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (6)
<223> Xaa is any amino acid

<400> 37
Ser Leu Leu Phe Asn Xaa Asn Gly Trp Gly Pro Leu Phe Trp Ala Ser
1 5 10 15
Val Pro Pro

<210> 38
<211> 60
<212> PRT
<213> Hordeum vulgare

<400> 38
Val Ile Thr Ile Ala Leu Ser Arg Leu Lys Met Arg Thr Trp Lys Lys
1 5 10 15
Trp Glu Thr Glu Thr Thr Ser Leu Glu Tyr Gln Phe Ala Asn Asp Pro
20 25 30
Ala Arg Phe Arg Phe Thr His Gln Thr Ser Phe Val Lys Arg His Leu
35 40 45
Gly Leu Ser Ser Thr Pro Gly Ile Arg Trp Val Val
50 55 60

<210> 39
<211> 60
<212> PRT
<213> Arabidopsis thaliana

<400> 39
Ile Val Thr Tyr Ala Phe Gly Lys Ile Lys Met Arg Thr Trp Lys Ser
1 5 10 15
Trp Glu Glu Glu Thr Lys Thr Ile Glu Tyr Gln Tyr Ser Asn Asp Pro
20 25 30
Glu Arg Phe Arg Phe Ala Arg Asp Thr Ser Phe Gly Arg Arg His Leu
35 40 45
Asn Phe Trp Ser Lys Thr Arg Val Thr Leu Trp Ile
50 55 60

<210> 40
<211> 45
<212> PRT
<213> Hordeum vulgare

<400> 40
Ser Ser Thr Pro Gly Ile Arg Trp Val Val Ala Phe Phe Arg Gln Phe
1 5 10 15
Phe Arg Ser Val Thr Lys Val Asp Tyr Leu Thr Leu Arg Ala Gly Phe
20 25 30
Ile Asn Ala His Leu Ser Gln Asn Ser Lys Phe Asp Phe
35 40 45

<210> 41
<211> 45
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (29)
<223> Xaa is any amino acid

<400> 41
Ser Lys Thr Arg Val Thr Leu Trp Ile Val Cys Phe Phe Arg Gln Phe
1 5 10 15
Phe Gly Ser Val Thr Lys Val Asp Tyr Leu Ala Leu Xaa His Gly Phe
20 25 30
Ile Met Ala His Phe Ala Pro Gly Asn Glu Ser Arg Phe
35 40 45

<210> 42
<211> 21
<212> PRT
<213> Hordeum vulgare

<400> 42
Ser Lys Phe Asp Phe His Lys Tyr Ile Lys Arg Ser Met Glu Asp Asp
1 5 10 15
Phe Lys Val Val Val
20

<210> 43
<211> 21
<212> PRT
<213> Arabidopsis thaliana

<220>
<221> SITE
<222> (14, 15)
<223> Xaa is any amino acid

<400> 43
Ser Arg Phe Asp Phe Arg Lys Tyr Ile Gln Arg Ser Leu Xaa Xaa Asp
1 5 10 15
Phe Lys Thr Val Val
20

<210> 44
<211> 53
<212> PRT
<213> Hordeum vulgare

<400> 44
Ser Lys Phe Asp Phe His Lys Tyr Ile Lys Arg Ser Met Glu Asp Asp
1 5 10 15
Phe Lys Val Val Val Gly Ile Ser Leu Pro Leu Trp Gly Val Ala Ile
20 25 30
Leu Thr Leu Phe Leu Asp Ile Asn Gly Val Gly Thr Leu Ile Trp Ile
35 40 45
Ser Phe Ile Pro Leu
50

<210> 45
<211> 53
<212> PRT
<213> Oryza sativa

<220>
<221> SITE
<222> (12, 27, 51)
<223> Xaa is any amino acid

<400> 45
Thr Arg Phe Asn Phe Arg Lys Tyr Ile Lys Arg Xaa Leu Glu Asp Asp
1 5 10 15
Phe Lys Thr Val Val Gly Ile Ser Ala Pro Xaa Trp Ala Ser Ala Leu
20 25 30
Ala Ile Met Leu Phe Asn Val His Gly Trp His Asn Leu Phe Trp Phe
35 40 45
Ser Thr Xaa Pro Leu
50

<210> 46
<211> 15
<212> PRT
<213> Hordeum vulgare

<400> 46
Pro Leu Val Ile Leu Leu Cys Val Gly Thr Lys Leu Glu Met Ile
1 5 10 15

<210> 47
<211> 15
<212> PRT
<213> Oryza sativa

<220>
<221> SITE
<222> (3)
<223> Xaa is any amino acid

<400> 47
Pro Leu Xaa Val Thr Leu Ala Val Gly Thr Lys Leu Gln Ala Ile
1 5 10 15

<210> 48
<211> 58
<212> PRT
<213> Hordeum vulgare

<400> 48
His Trp Phe Gln His Arg His Lys Lys Ala Leu Trp Glu Ala Leu Glu
1 5 10 15

Lys Met Lys Ala Glu Leu Met Leu Val Gly Phe Ile Ser Leu Leu Leu
20 25 30

Ile Val Thr Gln Asp Pro Ile Ile Ala Lys Ile Cys Ile Ser Glu Asp
35 40 45

Ala Ala Asp Val Met Trp Pro Cys Lys Arg
50 55

<210> 49
<211> 58
<212> PRT
<213> Oryza sativa

<220>
<221> SITE
<222> (2)
<223> Xaa is any amino acid

<400> 49
His Xaa Ser Glu Lys Thr His Arg Asn Pro Leu His Lys Ala Met Glu
1 5 10 15

Lys Met Lys Glu Glu Met Met Leu Leu Gly Phe Ile Ser Leu Leu Leu
20 25 30

Ala Ala Thr Ser Arg Ile Ile Ser Gly Ile Cys Ile Asp Ser Lys Tyr
35 40 45

Tyr Asn Ser Asn Phe Ser Pro Cys Thr Arg

<210> 50
 <211> 382
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <221> misc_feature
 <222> (68, 88, 143, 181, 251, 254, 328, 333, 337, 341)
 <223> n is a or g or c or t

<220>
 <221> misc_feature
 <222> (348, 349, 356, 357, 368, 370, 372, 373, 381)
 <223> n is a or g or c or t

<400> 50
 caagtatatg atgcgcgctc tagaggatga tttcaaacaa gttgttggtta ttagttggta 60
 tctttggntc tttgtcgtca tcttttttct gctaaatgtt aacggatggc acacatatatt 120
 ctggatagca tttattccct ttncctttgct tcttgctgtg ggaacaaagt tggagcatgt 180
 nattgcacag ttagctcatg aagttgcaga gaaacatgta gccattgaag gagacttagt 240
 ggtgaaaccc ncanatgagc atttctgggt cagcaaacct caaattgttc tctacttgat 300
 cccattttat cctctttccc agaatgcntt ttnagantgc ntttttttnt tttggnnntt 360
 ggggtaanan annngtttcg nc 382

<210> 51
 <211> 390
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <221> misc_feature
 <222> (68, 181, 284, 296, 302, 331, 333, 339..341, 351, 357)
 <223> n is a or g or c or t

<220>
 <221> misc_feature
 <222> (358, 366..369, 378, 380)
 <223> n is a or g or c or t

<400> 51
 caagtatatg atgcgcgctc tagaggatga tttcaaacaa gttgttggtta ttagttggta 60
 tctttggntc tttgtcgtca tcttttttct gctaaatgtt aacggatggc acacatatatt 120
 ctggatagca tttattccct ttgctttgct tcttgctgtg ggaacaaagt tggagcatgt 180
 nattgcacag ttagctcatg aagttgcaga gaaacatgta gccattgaag gagacttagt 240
 ggtgaaacct cagatgagca tttctgggtc agcaaacctc aaantgttct ctactngatc 300
 cncctttatcc cccttcagca atgccttttt nangattcnn ntttttcctt nttggannnt 360
 ttgggnnnnc aaacgggntt nggacctccg 390

<210> 52

<211> 585
<212> DNA
<213> Arabidopsis thaliana

<220>
<221> misc_feature
<222> (87, 404, 415, 417, 420, 425, 432, 439, 442)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (449, 460, 480, 485, 493, 511, 515, 527, 530, 551)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (558, 567, 571, 582)
<223> n is a or g or c or t

<400> 52
agcaagacga gagtcacact atggattggt tgttttttta gacagttctt tggatctgtc 60
accaaagttg attacttagc actaagncat ggtttcatca tggcgcattt tgctcccggg 120
aacgaatcaa gattcgattt ccgcaagtat attcagagat cattagagaa agacttcaaa 180
accgttggtg aaatcagtcg gggtatctgg tttgtcgctg tgctattcct cttgaccaat 240
tcatatggat tacgtttctta cctctgggta ccattcattc cactagtcgt aattctaata 300
gttggaaaca agcttgaagt cataataaca aaattgggtc taaggatcca agaggaaggt 360
gatgtggtga gaggcgcgcc agtggttcag cctggtgatg accncttctg gtttngnaan 420
cacgnttcaa tnttttcctt antcacttng gcctttttan ggggtgaattt caacttcatt 480
ctttncctgg ggnccgatga ttcaatccaa naatnttccc ctgaagnctn caagtttggg 540
cataggcttt nggtgggntt ttcaganttt nagtttggct tnccc 585

<210> 53
<211> 460
<212> DNA
<213> Arabidopsis thaliana

<220>
<221> misc_feature
<222> (117, 243, 323, 325, 388, 407, 409, 414, 417, 419)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (435, 446, 458)
<223> n is a or g or c or t

<400> 53
tgcattgtta cttatgcttt cggaaagatc aagatgagga cgtggaagtc gtgggaggaa 60
gagacaaaga caatagagta tcagtattcc aacgatcctg agaggttcag gtttgcnagg 120
gacacatctt ttgggagaag acatctcaat ttctggagca agacgagagt cacactatgg 180
attgtttgtt tttttagaca gttctttgga tctgtcacca aagttgatta cttagcacta 240
agncatggtt tcatcatggc gcattttgct cccggtaacg aatcaagatt cgatttccgc 300
aagtatattc agagatcatt agngnaagac ttcaaaaccg ttgtttgaaa tcagtcgggt 360
tatctgggtt gtcggctgtg ctattccnct tgaccaattc atatggntnc ggtnttncnc 420

tggtaccatt attcnctagc ggaatntaaa agttggcnga

460

<210> 54
<211> 476
<212> DNA
<213> Arabidopsis thaliana

<220>
<221> misc_feature
<222> (30, 49, 55, 102, 132, 140, 183, 221, 274, 315)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (360, 388, 401, 408, 411, 443, 469, 473, 474)
<223> n is a or g or c or t

<400> 54
attcgtggat ggaaaaagtg ggagcaagan acattatcta atgactatna gtttntctatt 60
gatcattcaa gacttaggct cactcatgag acttcttttg tnagagaaca tacaagtttc 120
tggaacaacaa cncctttctn ctttaacgtc ggatgcttct ttaggcagtt ctttgtatct 180
gtngaaagaa ccgactactt gactctgctc catggattca nctctgccca tttagctcca 240
ggaagaaagt tcaacttcca gagatatatc aaangatctc tcgaggatga tttcaagttg 300
gtagtgtgaa taagnccagt tctttgggca tcatttgtaa tcttccttgc tgttcaatgn 360
taatggctgg ggaccattgt tttgggcntc ggtaccgcct ntactcanaa ncccaggctt 420
ttggccaagg ttcaaggaat ttngggacaa tggggtagaa tcgtgggcnc atnngg 476

<210> 55
<211> 400
<212> DNA
<213> Oryza sativa

<220>
<221> misc_feature
<222> (3, 5, 9, 10, 17, 18, 20, 22, 32..35, 37, 41)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (43, 45, 47, 50..53, 62, 65, 68, 71, 73, 75, 80, 81)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (89..91, 100, 107, 108, 113..115, 134, 153, 167, 176)
<223> n is a or g or c or t

<220>
<221> misc_feature
<222> (235, 280, 354, 362)
<223> n is a or g or c or t

<400> 55
tctnttttnn ttttcgnntn cntccacccc tnnntnctc nancncntn nnnttatctc 60
tntntntntc ncntntccn ncaccacenn ncgacgggcn tgactnngc ccnnngttcg 120

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aggctgcccc ctgncgtctg agacctacct tgnccatttga cggcacngga cttcanttgc 180
tgctcacttt atctctacgg gactagggttc aattttcgga aatacatcaa aaggncactg 240
gaggacgatt ttaagacagt tgttggcatt agtgcacccn tatgggcttc tgcgttggcc 300
attatgctct tcaatgttca tggatggcat aacttggttct gggtctctac aatnccccctt 360
gntagtaact ttagcagttg gaacaaagct gcaggctata 400

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<210> 56
<211> 325
<212> DNA
<213> Oryza sativa

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<220>
<221> misc_feature
<222> (164)
<223> n is a or g or c or t

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<400> 56
cagactacct gactttgagg cacggattca ttgctgctca tttatctcta gggactagggt 60
tcaattttcg gaaatacatc aaaagggtcac tggaggacga ttttaagaca gttgttggca 120
ttagtgcaacc cttatgggct tctgcgttgg ccattatgct cttnaatgtt catggatggc 180
ataacttggt ctggttctct acaatcccc ttgtagtaac tttagcagtt ggaacaaagc 240
tgcaggctat aattgcaatg atggctgttg aaattaaaga gaggcataca gtaattcaag 300
gaatgccggt ggtgaactca gtgat 325

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<210> 57
<211> 19
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer

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<400> 57
gtgcatctgc gtgtgcgta 19

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<210> 58
<211> 19
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer

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<400> 58
gtgtgcgtac ctggtagag 19

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<210> 59
<211> 18
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer

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<400> 59
aacgacgtct ggtgctg 18

<210> 60
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 60
tgcagctata tgaccttccc cctc 24

<210> 61
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 61
ggacatgctg atggctcaga 20

<210> 62
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 62
cagaacttgt ctcattcctg 20

<210> 63
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 63
ggctatacat tgggactaac a 21

<210> 64
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 64

cgaatcatca catcctatgt t

21

<210> 65

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 65

gcaagttcga cttccac

17

<210> 66

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 66

tcgacttcca caagtacatc a

21

<210> 67

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 67

agcgtacctg cgtacgtag

19

<210> 68

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 68

gttgccacac tttgccacg

19

<210> 69

<211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 69
 aagccaagac gacaatcaga 20

 <210> 70
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 70
 grrgccacac tttgccacg 19

 <210> 71
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 71
 aagccaagac gacaatcaga 20

 <210> 72
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 72
 gtgcatctgc gtgtgcgta 19

 <210> 73
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 73
 cagaaacttg tctcatccct g 21

<210> 74
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 74
agggtcagga tcgccac 17

<210> 75
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 75
ttgtggaggc cgtgttcc 18

<210> 76
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 76
tgcagctata tgaccttccc cctc 24

<210> 77
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 77
ggacatgctg atggctcaga 20

<210> 78
<211> 5
<212> PRT
<213> Hordeum vulgare

<400> 78
Lys Lys Lys Val Arg

1

5

<210> 79

<211> 4

<212> PRT

<213> Hordeum vulgare

<400> 79

Ser Ile Phe Asp

1